SEQUENCE LISTING

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<120> CRYSTAL STRUCTURE OF ACPS/ACP COMPLEX, SOLUTION STRUCTURE OF B. SUBTILIS ACP, AND USES THEREOF

<130> 2368/14

<140> US 09/770,834

<141> 2001-01-25

<150> US 60/202,466

<151> 2000-05-08

<160> 16

<170> PatentIn version 3.0

<210> 1

<211> 81

<212> PRT

<213> Bacillus subtilis

<400> 1

Gly Pro Leu Gly Ser Ala Asp Thr Leu Glu Arg Val Thr Lys Ile Ile
1 5 10 15

Val Asp Arg Leu Gly Val Asp Glu Ala Asp Val Lys Leu Glu Ala Ser
20 25 30

Phe Lys Glu Asp Leu Gly Ala Asp Ser Leu Asp Val Val Glu Leu Val
35 40 45

Met Glu Leu Glu Asp Glu Phe Asp Met Glu Ile Ser Asp Glu Asp Ala
50 55 60

Glu Lys Ile Ala Thr Val Gly Asp Ala Val Asn Tyr Ile Gln Asn Gln
65 70 75 80

Gln

<210> 2

<211> 120

<212> PRT

<213> Bacillus subtilis

<400> 2

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Ala Tyr Gly Ile Gly Leu Asp Ile Thr Glu Leu Lys Arg Ile Ala Ser
1               5                  10                  15

Met Ala Gly Arg Gln Lys Arg Phe Ala Glu Arg Ile Leu Thr Arg Ser
            20                  25                  30

Glu Leu Asp Gln Tyr Tyr Glu Leu Ser Glu Lys Arg Lys Asn Glu Phe
        35                  40                  45

Leu Ala Gly Arg Phe Ala Ala Lys Glu Ala Phe Ser Lys Ala Phe Gly
    50                  55                  60

Thr Gly Ile Gly Arg Gln Leu Ser Phe Gln Asp Ile Glu Ile Arg Lys
65                  70                  75                  80

Asp Gln Asn Gly Lys Pro Tyr Ile Ile Cys Thr Lys Leu Ser Gln Ala
                85                  90                  95

Ala Val His Val Ser Ile Thr His Thr Lys Glu Tyr Ala Ala Ala Gln
            100                 105                 110

Val Val Ile Glu Arg Leu Ser Ser
        115                 120
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<210> 3

<211> 122

<212> PRT

<213> Aquifex sp.

<400> 3

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Met Ile Gly Val Asp Ile Val Lys Asn Glu Arg Ile Lys Asp Ala Leu
1               5                  10                  15

Glu Arg Phe Gly Asp Lys Phe Leu Asp Arg Ile Tyr Thr Lys Arg Glu
            20                  25                  30

Leu Glu Tyr Cys Tyr Ala His Cys Asp Phe Leu Pro Cys Leu Ala Ala
        35                  40                  45

Arg Trp Ala Gly Lys Glu Ala Val Leu Lys Ala Phe Tyr Thr Glu Phe
    50                  55                  60

Lys Ile Phe Leu Arg Phe Lys Glu Ile Glu Ile Leu Gly Asn Arg Gly
65                  70                  75                  80

Arg Pro Pro Thr Val Val Ile Asn Arg Glu Gly Val Glu Glu Ile Leu
                85                  90                  95

Lys Asn Tyr Glu Val Ile Val Ser Leu Ser His Glu Arg Asp Tyr Ser
            100                 105                 110

Val Ala Val Ala Tyr Ile Lys Lys Lys Ser
        115                 120
```

<210> 4

<211> 122

<212> PRT

<213> Chlamydophila sp.

<400> 4

Met Glu Ile Ile His Ile Gly Thr Asp Ile Ile Glu Ile Ser Arg Ile
1 5 10 15

Arg Glu Ala Ile Ala Thr His Gly Asn Arg Leu Leu Asn Arg Ile Phe
20 25 30

Thr Glu Ala Glu Gln Lys Tyr Cys Leu Glu Lys Thr Asp Pro Ile Pro
35 40 45

Ser Phe Ala Gly Arg Phe Ala Gly Lys Glu Ala Val Ala Lys Ala Leu
50 55 60

Gly Thr Gly Ile Gly Ser Val Val Ala Trp Lys Asp Ile Glu Val Phe
65 70 75 80

Lys Val Ser His Gly Pro Glu Val Leu Leu Pro Ser His Val Tyr Ala
85 90 95

Lys Ile Gly Ile Ser Lys Val Ile Leu Ser Ile Ser His Cys Lys Glu
100 105 110

Tyr Ala Thr Ala Thr Ala Ile Ala Leu Ala
115 120

<210> 5

<211> 119

<212> PRT

<213> Helicobacter sp.

<400> 5

Met Ile Gly Ile Asp Ile Val Ser Ile Ala Arg Ile Glu Lys Cys Val
1 5 10 15

Lys Arg Phe Lys Met Lys Phe Leu Glu Arg Phe Leu Ser Pro Ser Glu
20 25 30

Ile Val Leu Cys Lys Asp Lys Ser Ser Ser Ile Ala Gly Phe Phe Ala
35 40 45

Leu Lys Glu Ala Cys Ser Lys Ala Leu Gln Val Gly Ile Gly Lys Glu
50 55 60

Leu Ser Phe Leu Asp Ile Lys Ile Ser Lys Ser Pro Lys Asn Ala Pro
65 70 75 80

Leu Ile Thr Leu Ser Lys Glu Lys Met Asp Tyr Phe Asn Ile Gln Ser
85 90 95

Leu Ser Ala Ser Ile Ser His Asp Ala Gly Phe Ala Ile Ala Val Val
100 105 110

Val Val Ser Ser Ser Asn Glu
115

<210> 6

<211> 119

<212> PRT

<213> Staphylococcus sp.

<400> 6

Met Ile His Gly Ile Gly Val Asp Leu Ile Glu Ile Asp Arg Ile Gln
1 5 10 15

Ala Leu Tyr Ser Lys Gln Pro Lys Leu Val Glu Arg Ile Leu Thr Lys
20 25 30

Asn Glu Gln His Lys Phe Asn Asn Phe Thr His Glu Gln Arg Lys Ile
35 40 45

Glu Phe Leu Ala Gly Arg Phe Ala Thr Lys Glu Ala Phe Ser Lys Ala
50 55 60

Leu Gly Thr Gly Leu Gly Lys His Val Ala Phe Asn Asp Ile Asp Cys
65 70 75 80

Tyr Asn Asp Glu Leu Gly Lys Pro Lys Ile Asp Tyr Glu Gly Phe Ile
85 90 95

Val His Val Ser Ile Ser His Thr Glu His Tyr Ala Met Ser Gln Val
100 105 110

Val Leu Glu Lys Ser Ala Phe
115

<210> 7

<211> 169

<212> PRT

<213> Thermotoga sp.

<400> 7

Met Ile Val Gly Val Gly Ile Asp Val Leu Glu Val Glu Arg Val Pro
1 5 10 15

Glu Lys Phe Ala Glu Arg Ile Leu Gly Glu Ser Glu Lys Arg Leu Phe
20 25 30

Leu Thr Arg Lys Arg Arg Arg Glu Phe Ile Ala Gly Arg Phe Ala Leu
35 40 45

Lys Glu Ala Phe Phe Lys Ala Leu Gly Thr Gly Leu Asn Gly His Ser
50 55 60

Phe Thr Asp Val Glu Phe Leu Glu Ser Asn Gly Lys Pro Val Leu Cys
65 70 75 80

Val His Lys Asp Phe Gly Phe Phe Asn Tyr Ala His Val Ser Leu Ser
85 90 95

```
His Asp Arg Phe Ala Val Ala Leu Val Val Leu Glu Lys Arg Lys Gly
             100                 105                 110

Asp Ile Ile Val Glu Gly Asp Glu Ser Phe Leu Arg Lys Arg Phe Glu
         115                 120                 125

Val Leu Glu Arg Ser Val Glu Gly Trp Glu Ile Glu Thr Ser Leu Pro
     130                 135                 140

Pro Phe Thr Leu Lys Lys Leu Leu Glu Ser Ser Gly Cys Arg Leu Val
145                 150                 155                 160

Arg Tyr Gly Asn Ile Leu Ile Gly Glu
                165
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<210> 8

<211> 126

<212> PRT

<213> Escherichia coli

<400> 8

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Met Ala Ile Leu Gly Leu Gly Thr Asp Ile Val Glu Ile Ala Arg Ile
1               5                   10                  15

Glu Ala Val Ile Ala Arg Ser Gly Asp Arg Leu Ala Arg Arg Val Leu
            20                  25                  30

Ser Asp Asn Glu Trp Ala Ile Trp Lys Thr His His Gln Pro Val Arg
        35                  40                  45

Phe Leu Ala Lys Arg Phe Ala Val Lys Glu Ala Ala Ala Lys Ala Phe
    50                  55                  60

Gly Thr Gly Ile Arg Asn Gly Leu Ala Phe Asn Gln Phe Glu Val Phe
65                  70                  75                  80

Asn Asp Glu Leu Gly Lys Pro Arg Leu Arg Leu Trp Gly Glu Ala Leu
                85                  90                  95

Lys Leu Ala Glu Lys Leu Gly Val Ala Asn Met His Val Thr Leu Ala
            100                 105                 110

Asp Glu Arg His Tyr Ala Cys Ala Thr Val Ile Ile Glu Ser
        115                 120                 125
```

<210> 9

<211> 126

<212> PRT

<213> Rickettsia sp.

<400> 9

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Met Leu Ile Gly Val Gly Thr Asp Ile Val Gln Ile Pro Arg Ile Glu
1               5                   10                  15
```

Lys Ile Leu Asn Ile Tyr Gln Glu Leu Phe Ala Lys Lys Ile Leu Ala
20 25 30

Leu Lys Glu Leu Lys Gln Phe Thr Leu Leu Asn Lys Thr Asn His Ala
35 40 45

Thr Phe Leu Ala Lys Arg Phe Ser Ala Lys Glu Ala Val Ser Lys Ala
50 55 60

Phe Gly Val Gly Ile Gly Arg Gly Ile Asn Phe Lys Asp Ile Thr Ile
65 70 75 80

Leu Asn Asp Asn Leu Gly Lys Pro Thr Val Glu Ile Ser Ser His Tyr
85 90 95

Thr Asn Lys Leu Ala Pro Phe Asn Ile His Leu Ser Leu Ser Asp Asp
100 105 110

Tyr Pro Ile Cys Ile Ala Phe Ala Ile Ile Glu Ser Asn Cys
115 120 125

<210> 10

<211> 123

<212> PRT

<213> Streptomyces sp.

<400> 10

Met Ser Ile Ile Gly Val Gly Ile Asp Val Ala Glu Val Glu Arg Phe
1 5 10 15

Gly Ala Ala Leu Glu Arg Thr Pro Ala Leu Ala Gly Arg Leu Phe Leu
20 25 30

Glu Ser Glu Leu Leu Leu Pro Gly Gly Glu Arg Arg Gly Val Ala Ser
35 40 45

Leu Ala Ala Arg Phe Ala Ala Lys Glu Ala Leu Ala Lys Ala Leu Gly
50 55 60

Ala Pro Ala Gly Leu Leu Trp Thr Asp Ala Glu Val Trp Val Glu Ala
65 70 75 80

Gly Gly Arg Pro Arg Leu Arg Val Thr Gly Thr Val Ala Ala Arg Ala
85 90 95

Ala Glu Leu Gly Val Ala Ser Trp His Val Ser Leu Ser His Asp Ala
100 105 110

Gly Ile Ala Ser Ala Val Val Ile Ala Glu Gly
115 120

<210> 11

<211> 125

<212> PRT

<213> Treponema sp.

<400> 11

Met Ile Ile Gly Val Gly Ile Asp Ile Val Glu Ile Glu Arg Phe Val
1 5 10 15

Ser Trp Thr His Asn Val Arg Leu Leu Arg Arg Phe Phe His Gln Glu
20 25 30

Glu Ile Val Asp Phe Phe Lys Asn His Met Arg Ala Gln Phe Leu Ala
35 40 45

Thr Arg Phe Ala Ala Lys Glu Ala Phe Gly Lys Ala Leu Gly Thr Gly
50 55 60

Leu Arg Asn Met Glu Leu Arg Asn Ile Arg Val Cys Gln Asn Gly Trp
65 70 75 80

Gly Lys Pro Arg Leu Glu Val Tyr Gly Ala Ala Gln Ala Met Leu Ala
85 90 95

Ala Thr Gly Gly Thr His Ile Gln Val Ser Leu Thr His Glu Arg Glu
100 105 110

Val Ala Ser Ala Ile Val Ile Ile Glu Gly Glu Pro Leu
115 120 125

<210> 12

<211> 121

<212> PRT

<213> Bacillus sp.

<400> 12

Met Ile Tyr Gly Ile Gly Leu Asp Ile Thr Glu Leu Lys Arg Ile Ala
1 5 10 15

Ser Met Ala Gly Arg Gln Lys Arg Phe Ala Glu Arg Ile Leu Thr Arg
20 25 30

Ser Glu Leu Asp Gln Tyr Tyr Glu Leu Ser Glu Lys Arg Lys Asn Glu
35 40 45

Phe Leu Ala Gly Arg Phe Ala Ala Lys Glu Ala Phe Ser Lys Ala Phe
50 55 60

Gly Thr Gly Ile Gly Arg Gln Leu Ser Phe Gln Asp Ile Glu Ile Arg
65 70 75 80

Lys Asp Gln Asn Gly Lys Pro Tyr Ile Ile Cys Thr Lys Leu Ser Gln
85 90 95

Ala Ala Val His Val Ser Ile Thr His Thr Lys Glu Tyr Ala Ala Ala
100 105 110

Gln Val Val Ile Glu Arg Leu Ser Ser
115 120

<210> 13

<211> 139

<212> PRT

<213> Bradyrhizobium sp.

<400> 13

```
Met Ile Ile Gly Ile Gly Ser Asp Leu Ile Asp Ile Thr Arg Val Gly
1               5                  10                  15

Lys Val Ile Glu Arg His Gly Glu Arg Phe Leu Asp Arg Ile Phe Thr
            20                  25                  30

Ala Ala Glu Arg Ala Lys Ala Glu Arg Arg Ala Lys Asn Glu Lys Met
        35                  40                  45

Val Val Ala Thr Tyr Ala Lys Arg Phe Ala Ala Lys Glu Ala Cys Ser
    50                  55                  60

Lys Ala Leu Gly Thr Gly Ile Arg Arg Gly Val Trp Trp Arg Asp Met
65                  70                  75                  80

Gly Val Val Asn Leu Pro Gly Gly Arg Pro Thr Met Gln Leu Thr Gly
                85                  90                  95

Gly Ala Leu Ala Arg Leu Gln Ala Leu Thr Pro Asp Gly Phe Glu Ala
            100                 105                 110

Arg Ile Asp Val Ser Ile Thr Asp Asp Trp Pro Leu Ala Gln Ala Phe
        115                 120                 125

Val Ile Ile Ser Ala Val Pro Leu Ala Lys Ser
    130                 135
```

<210> 14

<211> 130

<212> PRT

<213> Mycobacterium sp.

<400> 14

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Met Gly Ile Val Gly Val Gly Ile Asp Leu Val Ser Ile Pro Asp Phe
1               5                  10                  15

Ala Glu Gln Val Ser Gln Pro Gly Thr Val Phe Met Thr Ile Phe Thr
            20                  25                  30

Pro Gly Glu Arg Arg Asp Ala Ser Val Lys Ser Ser Ser Ala Val Cys
        35                  40                  45

His Leu Ala Ala Arg Trp Ala Val Lys Glu Ala Val Ile Lys Ala Trp
    50                  55                  60

Ser Gly Ser Arg Phe Ala Gln Arg Pro Met Leu Pro Glu Asn Ile His
65                  70                  75                  80

Arg Asp Ile Glu Val Val Asn Asp Met Trp Gly Arg Pro Arg Val Arg
                85                  90                  95

Leu Thr Gly Ala Ile Ala Lys His Leu Thr Asp Val Thr Ile His Val
            100                 105                 110
```

Ser Leu Thr His Glu Gly Asp Ile Ala Ala Ala Val Val Ile Leu Glu
115 120 125

Val Leu
130

<210> 15

<211> 77

<212> PRT

<213> Escherichia coli

<400> 15

Ser Thr Ile Glu Glu Arg Val Lys Lys Ile Ile Gly Glu Gln Leu Gly
1 5 10 15

Val Lys Gln Glu Glu Val Thr Asn Asn Ala Ser Phe Val Glu Asp Leu
20 25 30

Gly Ala Asp Ser Leu Asp Thr Val Glu Leu Val Met Ala Leu Glu Glu
35 40 45

Glu Phe Asp Thr Glu Ile Pro Asp Glu Glu Ala Glu Lys Ile Thr Thr
50 55 60

Val Gln Ala Ala Ile Asp Tyr Ile Asn Gly His Gln Ala
65 70 75

<210> 16

<211> 86

<212> PRT

<213> Streptomyces coelicolor

<400> 16

Met Ala Thr Leu Leu Thr Thr Asp Asp Leu Arg Arg Ala Leu Val Glu
1 5 10 15

Cys Ala Gly Glu Thr Asp Gly Thr Asp Leu Ser Gly Asp Phe Leu Asp
20 25 30

Leu Arg Phe Glu Asp Ile Gly Tyr Asp Ser Leu Ala Leu Met Glu Thr
35 40 45

Ala Ala Arg Leu Glu Ser Arg Tyr Gly Val Ser Ile Pro Asp Asp Val
50 55 60

Ala Gly Arg Val Asp Thr Pro Arg Glu Leu Leu Asp Leu Ile Asn Gly
65 70 75 80

Ala Leu Ala Glu Ala Ala
85